



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

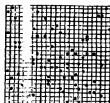
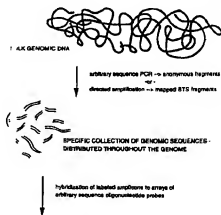
(51) International Patent Classification ⁶ : C12Q 1/68, C12P 19/34	A1	(11) International Publication Number: WO 97/22720 (43) International Publication Date: 26 June 1997 (26.06.97)
(21) International Application Number: PCT/US96/20628 (22) International Filing Date: 20 December 1996 (20.12.96) (30) Priority Data: 60/009,027 21 December 1995 (21.12.95) US (71)(72) Applicant and Inventor: BEATTIE, Kenneth, Loren [US/US]; 2 Hollymead Drive, The Woodlands, TX 77381 (US). (74) Agent: ADLER, Benjamin, Aaron; McGregor & Adler, P.C., 8011 Candle Lane, Houston, TX 77081 (US).	(81) Designated States: AU, CA, JP, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	

(54) Title: **ARBITRARY SEQUENCE OLIGONUCLEOTIDE FINGERPRINTING**

(57) Abstract

The present invention provides a method of arbitrary sequence oligonucleotide fingerprinting (ASOF), a technology which eliminates gel electrophoresis as a step in polymorphic marker analysis, species identification and transcriptional profiling. ASOF greatly increases the speed and throughput of analysis with a concomitant decrease in cost. Furthermore, the miniaturization and automation of ASOF analysis leads to exceedingly increased throughput of nucleic acid analysis.

ARBITRARY SEQUENCE OLIGONUCLEOTIDE FINGERPRINTING (ASOF)



HYBRIDIZATION FINGERPRINTS
REFLECT SAMPLED SEQUENCE
OF AMPLIFIED GENOMIC REGIONS.

SEQUENCE POLYMORPHISMS SEEN AS
DIFFERENCES IN HYBRIDIZATION PATTERN
PRODUCED FROM DIFFERENT INDIVIDUALS.

THOSE PROBES THAT DETECT SEQUENCE
POLYMORPHISMS PLACED ONTO A SINGLE
GENOMERICHIP FOR BULKY ANALYSIS
ANALYSIS OF NUMEROUS ASOF MARKERS